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An Inaugural Essay
on
Bilious Fever,
As it prevailed in Mecklenburg
County, Virginia;
for
The degree of Doctor of Medicine
in
The University of Pennsylvania,
by
James H. Gregory, of Virginia.

"The rivers die into offensive pools
And, charged with putrid verdant breath, a gross
And mortal nuisance into all the air."

Philadelphia, November the 16th 1827.

Of the Aetio Symptomatum, and Pathology of the disease now under consideration; no precise account has ever been given by writers on the various forms of bilious fever; as far as I know.

That it had its origin in the stomach I am fully persuaded from the cause, symptoms, and the treatment which succeeded in arresting its progress; and also from the appearances upon dissections after death.

For several years previous to the appearance of this disease, the neighbourhood in which it prevailed, had been frequently visited by the various other forms of bilious fever, but never before

by one of such a character as this until the fall of the year 1825.

The spring, and summer were very wet; we had frequent and heavy showers of rain for successive days, alternating with an intensely hot sun. During this time no disease appeared, the rain ceased for a short time, and the weather remained excessively warm, about the middle of september the rain commenced again, and continued for sometime longer.

About the 20th of september the disease above alluded to; made its appearance, and was supposed (from the manner in which it commenced its terrible ravages) to be the unexpected effect of a large

quantity of green timber thrown into a pond of stagnant water which was left in that situation by the stream having been turned from its former course at the head of a mill pond. From this pond (in which the timber was in a state of high fermentation, and putrefaction) there escaped a pestiferous halitus which produced in all who were within its reach (the blacks generally excepted, though some suffered) a most violent form of bilious fever, commencing with those who were nearest to it. It became an object of terror to every person who was obliged to remain in the immediate neighbourhood of it.

It is well to remark here

that there were frequent fogs, and I may say on nearly every morning. They were of uncommon duration, remaining until from about half past ten to half past eleven o'clock A.M.

This the above mentioned timber was cut down with a view to prepare land for cultivation, and was thrown into this pond, for the purpose of filling it up; and also ~~cut~~ with a view of getting the timber out of the way.

This was done during the months of July, and August, and as I have before said the disease showed itself about the 20th of September, and continued until several heavy frosts had come, when it disappeared. I will remark that before the cultivation of the cotton crop that the neighbourhood had never been visited by

any violent form of fever: except in one instance, and that was on the fall of the year 1821, and that was the subject of a considerable controversy.

Marsh Miasmata appears evidently to have been the remote cause of the disease; and it had for its exciting cause an exposure to cold, and also the excessive heat of the midday sun or excess in eating, or drinking, or some of the passions of the mind; as anger, fear, grief &c

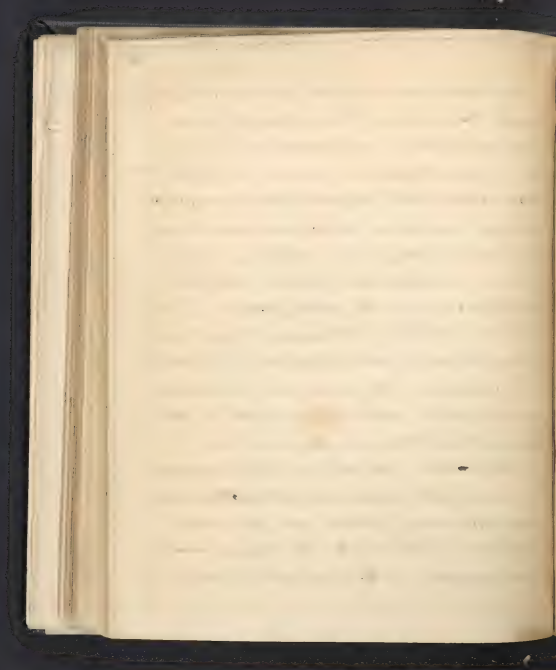
Symptoms. As in most other violent forms of disease, It was ushered in with a chill sometimes (though rarely) amounting to shivering, with violent pain in the head, with much oppression about the praecordia, and sometimes even pain at that point; in some instances, the pa-



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-tient- complained of an uneasiness or pain
across the region of the liver, the pulse
was quick, tense, and corded, and not
easily compressed, a hurried, or difficult
respiration, with frequent and heavy sighs.
In most instances, there was much coma
and not unfrequently delirium, and in
the most violent cases terrible distortions
of the face, and also great flushes of heat
both of which would seem to denote apo-
plexy, or some other affection of the brain.

In some cases the pulse was full, and fre-
quent which was to be met with in the
less violent forms of the complaint.

The skin was dry, and hot, particular-
ly about the head, and epigastrium, it
was also very yellow over the whole
surface of the body. The tongue was dry,
and covered with a dark brown



incrustation; the urine was scanty, and very highly coloured, and when voided, imparted a burning pain to the patient. Not unfrequently, cases were to be met with in which the patient was troubled with great nausea, and would often discharge from his stomach a dark, acrid bilious matter, very much of the colour, and consistence of indigo mud. He was troubled with great thirst, and was void of appetite. For many days previous to the attack the patient was troubled with loose bowels though the stools were scanty; very offensive and attended ~~with~~ with a smarting pain when voided. There was much torpor about the system, and particularly about the intestines, this was clearly evinced by the immense quantity of medicine that was

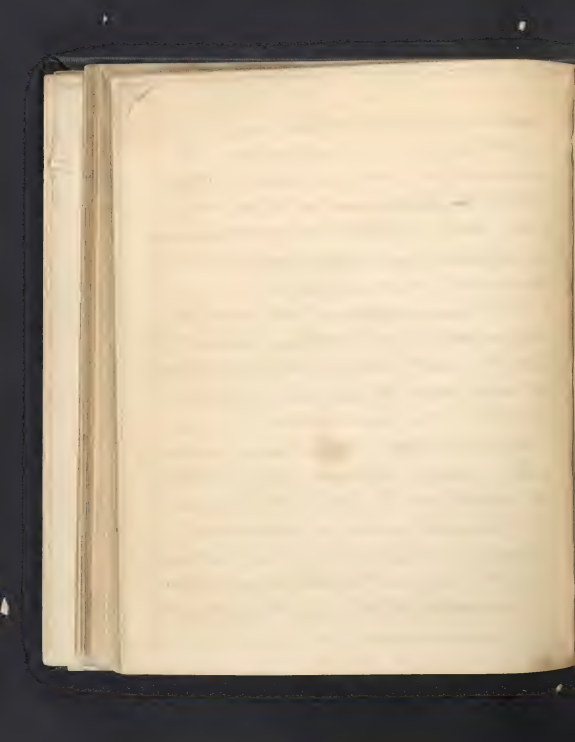


required to operate on the bowels.

The disease in most cases assumed the intermittent form, and particularly that of the tertian, and if proper measures were not taken to arrest its progress the aggravia gradually decreased until it became one continued fever.

As I have already said the cold stage was scarcely perceptible, and I think it well to remark here, that the less violent the cold stage the more violent was the hot one, and "vice versa."

The critical days were, as usual in the other forms of bilious fever, but about the ninth day in particular the patient was thought to be at the most critical period, as more persons died on that day and the day after than on any other Treatment. To this part of my sub-



-ject I will call your attention, more particularly, as the regular, or common course of practice was employed with entire success: whereas practice (I may say almost empirical) succeeded in the happiest manner. Though notwithstanding some of the symptoms were deceptive, they were generally well developed, as Dr. Chapman very justly observes there are cases sometimes to be met with in practice that are not amenable to any of our regular resources and that experience is our only guide.

The symptom heretofore alluded to, as deceptive, is that of the tense, and corded pulse which was frequently to be met with in this disease, and which by some is always supposed to call for the use of the lancet.



Its occurrence in this disease is perhaps one of the exceptions to this rule. As a general rule this sort of pulse does demand the employment of bloodletting.

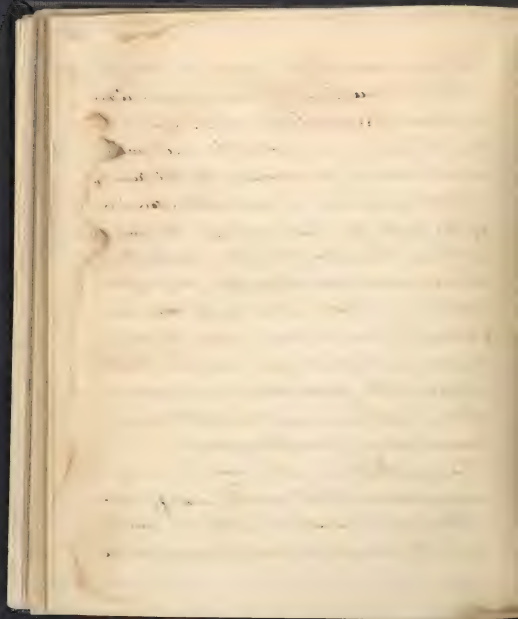
There are similar states of the system on record though they are rarely to be met with. Instances may be found in Doctor Rush's medical inquiries.

He says that there are cases in which the pulse would not yield either to frequent, or copious bleedings, that you might bleed a patient to death without affecting the slightest change in his pulse. He adds that a tense pulse does not always call for the use of the lancet, nor even does ~~viz~~ blood, I am fully convinced. I have seen ^{says} two cases of incurable consumption from tubercles, and ulcers in the lungs in which

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the pulse cannot be made to feel the least diminution of tension from either copious, or frequent bleedings. Cases of hepatic fever are also to be met with which cannot be subdued by this remedy.

I have, he observes, met with a tension of the pulse in hemorrhages that would yield to the lancet, that a patient whose blood was seized, three days after losing a gallon, and a half, from his stomach, had a tense pulse the day before he died, "I also saw the last strokes of the pulse tense, in a patient whom I lost in a yellow fever, by a haemorrhage from his nose."

He says that in such cases the only circumstance that would justify blood-letting is in cases of extreme pain, that this remedy is to be preferred to the



use of opium. Dr. Davidge of Baltimore also mentions to have seen similar states of the system in yellow fever.

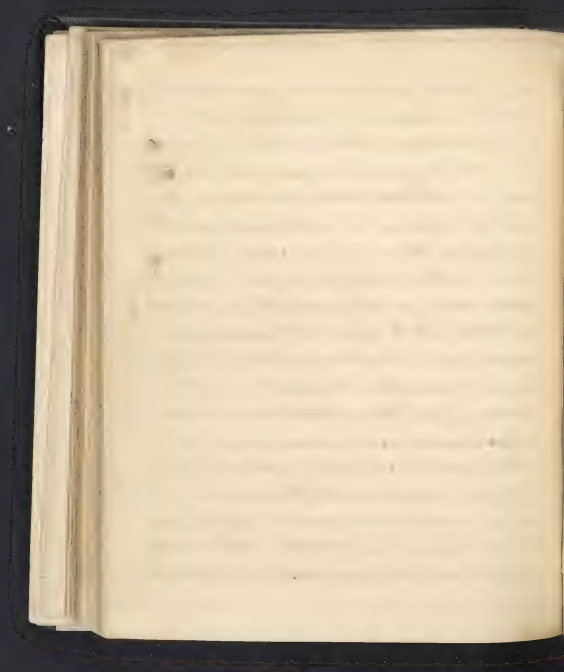
In the treatment of such cases, ^{some} of the patients were bled, and they died; others were not bled, and they also died, but those who were purged freely, and discriminatedly recovered.

Dr. John R. Lucas formerly of Virginia, mentions in a publication in the Medical Recorder, to have seen in the same neighborhood in which this disease prevailed, similar states of the pulse in cases of bilious autumnal fever.

Dr. Cooke also formerly of Virginia has published in the same work, facts similar to those above mentioned.

In the cases which first appeared, the remedies usually employed

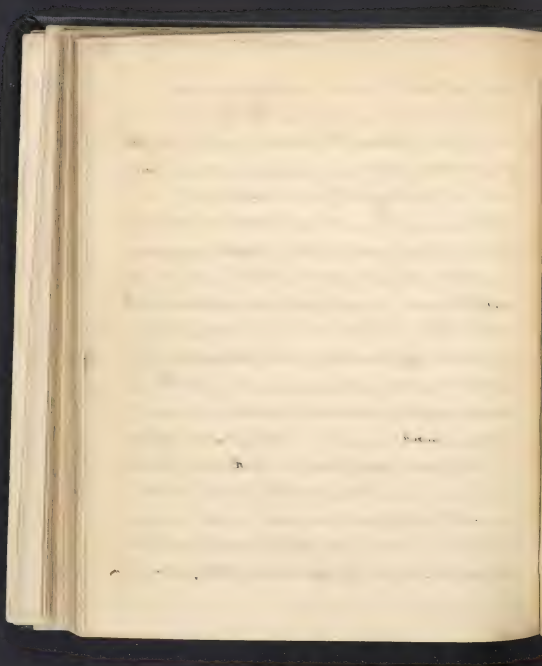
in bilious fever, were resorted to, such as moderate bleeding which in particular seemed to be of no avail. the ordinary medicines were given with a view to catharsis which had scarcely the effect of opening the bowels much less that of purging them. In some cases blisters were applied to the head with a view to relieve pain, in other cases the ice cap was substituted which appeared to answer the purpose much better though not altogether sufficient to accomplish the purpose for which it was applied. Diaphoretics were also used, and as a dernier resort mercury was given with a view to salivation, but without effect for it was urged to the greatest extent, and in no case did it produce the slightest ptyalism. These failing together with various other means that were employed, physicians



were induced to resort to other measures.

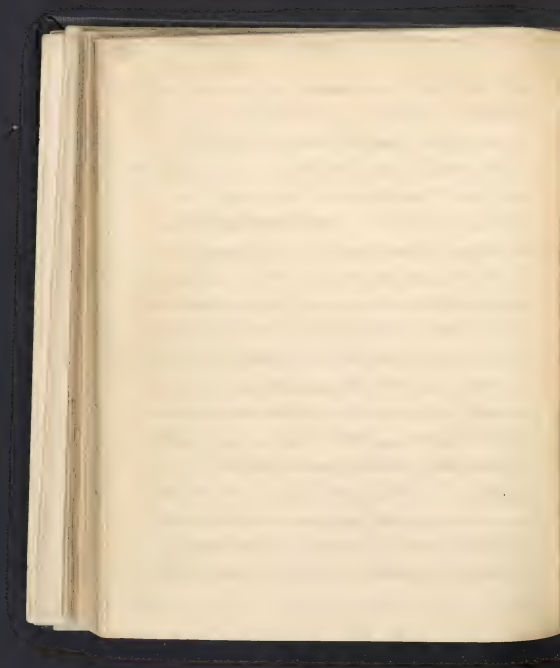
The physician on being called to a patient would find him labouring under a chill, or ascertain that he had previously had one, and not unfrequently in a state of coma, or delirium, with much vascular excitement, and in short, most of the detailed symptoms present. The practice which proved successful was to moderate the violence of the cold stage, which was best accomplished by warm applications, such as keeping the patient warmly covered in bed, bottles of warm water, or warm bricks, or bags of warm sand, warm drinks &c &c &c.

The next object was to moderate the violence of reaction, which was best done by cold applications, such as the ice cap to the head, and ice applied to pit of the stomach, and by sponging the patient



with cold water, or vinegar, or vinegar, and water; this latter seemed to act like a charm in quieting restlessness, also by cold drinks such as balm tea & and where there was great desire for it ice water in small quantities was allowed. During this stage nausea was not infrequent which was remedied by the usual means.

During this stage small doses of calomel were given at very short intervals, to quiet irritation, and also with a view to its alterative effects. The sweating stage was generally short and sometimes scarcely perceptible, during this it was only necessary to keep the patient as comfortable as possible. The next object was the treatment during the apyrexia, as soon as the sweating stage was past, a large dose of calomel, and jalap with 3 or 4 grains of



gamboge were given, or in place of the jalap scammony was often given which seemed to act more promptly. This would seldom procure more than three, or four stools, and they would be scanty, twenty or thirty minutes after giving this dose senna tea was given freely until the patient was freely purged; not infrequently these large doses of medicine would have to be repeated over, and over again, and followed up by senna tea with oil $\frac{1}{4}$, before the purgative action could be induced. When once established large quantities of dark offensive matter, would be discharged, which would (from the immense quantity, and quality) seem to be a morbid secretion of the alimentary canal together with some functional derangement of the liver

injections were also used with a view
to their purgative effect. The patient on
going to stool would complain of much
pain, or irritation but as soon as that
effect was over if the stool was copious he would
be somewhat better, than before. The pain
produced on going to stool was greatly
relieved by injections of lime water. The
principal object in the cure of the disease was to
free the alimentary canal of its irritating contents
and next to prevent the returning paroxysm
which was best done by the administration of
of a dose of opium a few minutes before the
paroxysm was expected so as to have the system
under the effect of the medicine at that time.
The room was kept dark, and quiet. No food
was allowed the patient for several days
except a little toast water, and when
it became admissible a little chicken water.

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The first observation was made with a view
to the positive effect of the latter in
causing the blood vessels to contract of course
the result was a contraction but as soon as the
effect was over the blood was again found to
be somewhat better than before. The pain
continued on going to bed and was greatly
relieved by the use of the water. The
muscle acted in the way of the blood and
for the attention of the physician was
not to prevent the ordinary progress
which was best done by the administration of
a dose of opium a few minutes before the
progress was expected to be done the opium
under the effect of the medicine at this time
the room was left dark and quiet and the
was attended the patient for several days
except a little last night when the
the disease was still a little better.